STS Consultants, Ltd.
Solutions through Science & Engineering

April 3, 2001

Revised April 24, 2001

Mr. Timothy Ramsey
Piper Marbury Rudnick & Wolfe
203 N. LaSalle Street, Suite 1800
Chicago, Illinois 60601

RE: Waste Characterization Sampling and Analysis, GMO Site, Chicago Illinois—STS Project Number 1-25585-XG

Dear Mr. Ramsey:

In response to your request and our recent discussions, STS Consultants, Ltd. (STS) has prepared this revised proposal for the above referenced project. This proposal is in support of the removal and disposal of radiologically-impacted soil found on-site. The testing does not include testing conducted in the course of the excavation of the contaminated soils.

INTRODUCTION

The subject site, located at the northwest corner of Grand Avenue and McClurg Court, and east of the Time-Life Building, in Chicago, Illinois, has been found to contain radiologically-impacted soil. This soil is proposed to be removed by Teachers' Retirements System of Illinois (TRS) and delivered to Kerr-McGee Chemical, LLC (Kerr-McGee) for transportation and disposal at Envirocare in Clive, Utah. The purpose of this proposed investigation is to determine whether subsurface soil in the areas of known radiological contamination exhibits any characteristics which would classify the soil as a RCRA hazardous waste. This work scope describes the sampling and analysis to be conducted for this determination.

SCOPE OF WORK

Previous investigations by Koh and Associates documented seven locations where a combination of surface gamma scans, and down-hole sampling and analysis at some locations, showed evidence of elevated levels of gamma radiation and thorium concentrations. For this investigation, these seven locations will be drilled and sampled, with the samples analyzed for RCRA hazardous waste characteristics and radioactive content.

A Health and Safety Plan will be prepared for the investigation. This plan will be provided to USEPA for their review.

The site is anticipated to contain urban rubble fill consisting of sand, gravel, brick, mortar, concrete, cinder, ash, wood, and other debris. As a result of this debris fill, it is proposed to drill and sample this material using hollow-stem augers and split spoon samplers. A total of 10 locations are proposed to be sampled, as shown on Figure 1. Borings will extend through the fill, anticipated to be approximately 8 to 9 feet deep. Borings will extend a minimum of 10 feet

deep or two feet into natural sand soil, whichever is deeper. Borings will be continuously sampled for their entire depth.

The samples will be screened for gamma radiation using a 2 x 2 NaI detector. Those intervals in a boring exhibiting gamma radiation above the apparent clean-up level of 7.1 pCi/g will be consolidated into a single sample for that boring and submitted for analysis. All material exhibiting elevated gamma readings will be subjected to analysis. Material which does not exhibit elevated gamma readings will not be tested, as that material is not proposed to be disposed at Envirocare.

The proposed analysis will consist of the following:

Radioactivity—Gamma Spectroscopy

RCRA Characteristics—TCLP Volatiles, TCLP Semi-volatiles, TCLP Pesticides/Herbicides, TCLP Metals, Corrosivity (pH), Reactive Sulfide, Reactive Cyanide, Ignitability (Flashpoint), Paint Filter

The cuttings from the drilling will be contained in DOT approved drums and kept on site until provision can be made for their disposal. Those materials which exhibit elevated gamma counts will be consolidated into bulk containers with other radiologically-impacted soil, and transported to and disposed at Envirocare by Kerr-McGee.

PROPOSED BUDGET

The following presents our anticipated budget for the scope of work described above. This budget assumes two days of drilling. The schedule provides for decontamination of the drilling and sampling equipment between each boring, so as to minimize the potential for cross-contamination. Further, it is recognized that obstructions may be present and require multiple moves to complete the proposed number of borings.

The drilling program may entail more or less than the scheduled two days, and will be billed only for the units used. However, the screening of each recovered sample for gamma levels, the compositing of the intervals exhibiting elevated gamma levels, decontamination between each sample and between borings, and the potential for obstructions to constrain both sample recovery and drilling progress indicates a tentative schedule of two days is a prudent estimate.

Preparation of Project Health and Safety Plan, Coordination of USEPA for review of that plan	$ 1,500
Drilling and sampling, hollow-stem augers, split spoon sampling, truck-mounted rig, decon equipment. Assume two days.	$ 6,375

Environmental geologist/technician, screening equipment, sample handling, boring log preparation. Assume two days at $900/day	$ 1,800
Radiological and Chemical analysis—See attached quote. 10 samples at $967, plus 10% markup equals $1,064 each.	$10,640
Summary Report and Project Management—Estimate	$ 3,500
Estimated total	$23,815

SCHEDULE

This work can begin upon notice to proceed. Utilities will need to be cleared prior to start of drilling. However, this can be coordinated with the rest of the removal project and does not necessarily impact this budget. Upon notice to proceed, we can mobilize the drilling equipment within two weeks, and complete the sampling within three days. Laboratory analysis will take an estimated 10 business days from delivery of samples to receipt of results. A verbal report of findings can be provided immediately upon receipt of results. The summary report will be provided within two weeks of receipt of the laboratory report.

TERMS AND CONDITIONS

We propose to complete this work under the same terms and conditions agreed to for the work currently underway for this site. If this work scope and cost proposal are acceptable, please have a representative of the party responsible for payment of our invoices for this work sign one copy of this proposal and return it to this office as notice to proceed.

Should you have any questions with regard to the scope of services, fee estimate or work schedule as indicated herein, please contact us. We thank you for the opportunity to submit this proposal and look forward to working with you on this project.

Respectfully,

STS CONSULTANTS, LTD.

Richard G. Berggreen, C.P.G.
Principal Geologist

Accepted by:

Signature:_____

Title:_____

Firm:_____

Date:_____

STS Proposal No. 1-28858-XG

STL St Louis
13715 Rider Trail North
Earth City , MO 63045
Phone: 314-298-8566
Fax: 314-298-8757

SEVERN TRENT SERVICES

PRICE QUOTATION J030901-3

Requested By:	STS Consultants	Quote Number:	J030901-3
Prepared For:	Rich Berggreen	Prepared by	John Powell
	750 Corporate Woods Parkway	Date:	09-Mar-01
	Vernon Hills, IL 60061-3153	Lab Contact	John Powell
		Project Ref:	Golub & Co.
Phone:	847-279-2430	Est Start Date:	04/01/2001
Fax:	847-279-2510	Est Duration:	1 event

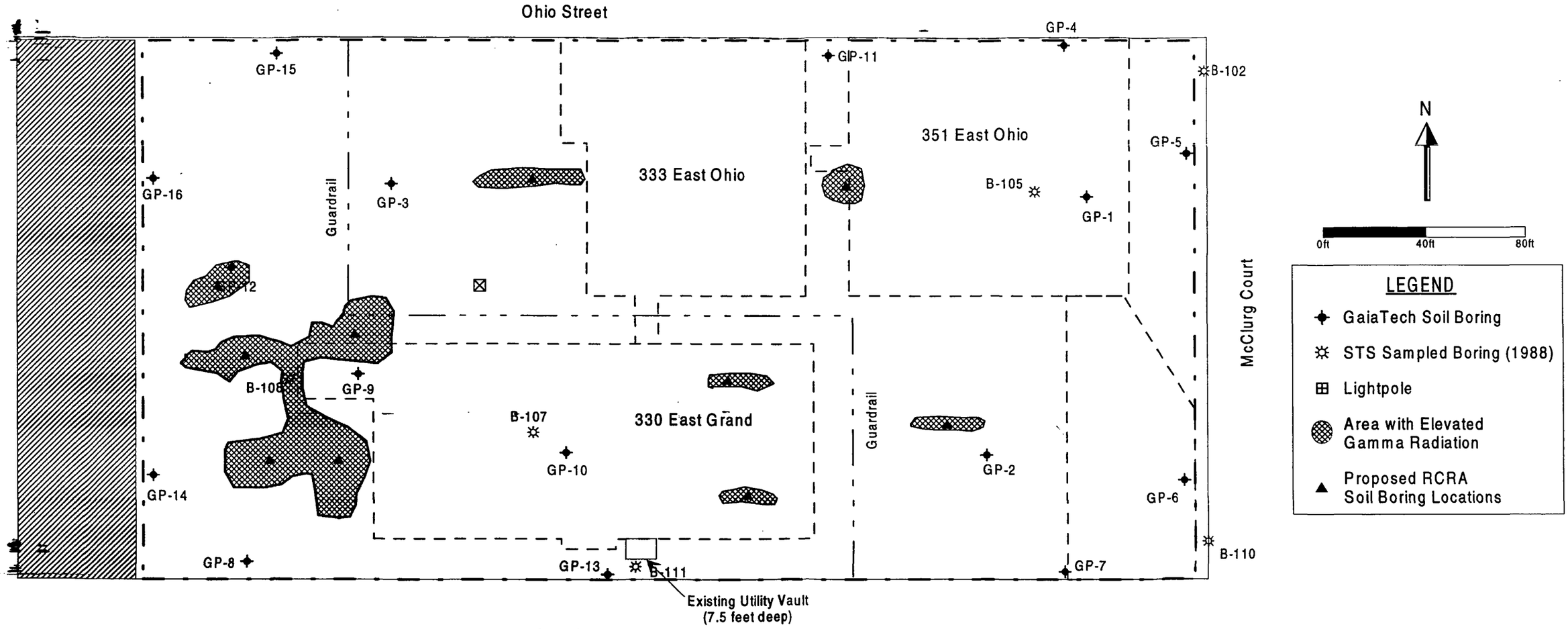
Method	Description	Matrix	Unit Price	
HASL 300	Gamma Spectroscopy	Soil	$ 110.00	$
SW846 1311	TCLP Extraction	Soil	$ 40.00	$
SW846 1311	TCLP Extraction - ZHE	Soil	$ 40.00	$
SW846 8260	Volatiles	Leachate	$ 105.00	$
SW846 8270	Semi-Volatiles	Leachate	$ 210.00	$
SW846 8081	Pesticides (Organochlorine)	Leachate	$ 120.00	$
SW846 8051	Herbicides (Organochlorine)	Leachate	$ 130.00	$
SW846 6010/7471	RCRA Metals	Leachate	$ 95.00	$
SW846 9040	Corrosivity (pH)	Soil	$ 10.00	$
SW846 9095	Paint Filter	Soil	$ 12.00	$
SW846 Ch. 7	Reactive Sulfide	Soil	$ 35.00	$
SW846 Ch. 7	Reactive Cyanide	Soil	$ 35.00	$
SW846 1010	Ignitability (Flashpoint)	Soil	$ 25.00	$

Please Note: Acceptance of quick turn work is subject to method requirements and lab capacity.
Please contact STL St. Louis a minimum of 1 week PRIOR to sending quick turn work for TAT availability.
Quick TAT samples received after 12:00 noon will be considered "received" the next business day for the purposes of TAT.

Client Service Options	Charge
Extended Sample Storage (>30 Days)	$5.00/sample/month
Sample Disposal	Return to client if mixed waste or if radioactive; otherwise disposal by lab
Electronic Data Deliverables (STL St. Louis std. format)	Included
Extended Data Package	10% of Unit Price, if required
Rush Turn Arounds - call lab for availability	See Below
Difficult Matrices, e.g. concrete, oily sluge	Unit Charge for each analytical run needed

Turnaround Time: 10 Business Days **Terms Effective:** 30 Days

NOTE: The TAT will start when all issues associated with samples received are resolved.



STS Consultants Ltd.
Consulting Engineers

STS PROJECT NO. 25585XG

STS PROJECT FILE

SCALE 1 in. = 40 ft.

FIGURE NO. 1

Proposed RCRA Soil Boring Locations
GMO Site
Ohio-Grand-McClurg
Chicago, Illinois

DRAWN BY BRS	DATE 3-12-01
CHECKED BY RGB	DATE revised 4-24-01
APPROVED BY SGT	DATE
CADFILE H:/summers/25585XG/proposed soil boring locations.srf	